# INTERNATIONAL BULLETIN OF PLANT PROTECTION

Official Correspondents for Plant Protection to the International, Institute of Agriculture.

(The countries are arranged in the French alphabetical order. The addresses of correspondents are in the language used by the respective Governments in their official communications with the Institute).

(Continued from No. 1.)

#### Dutch East Indies.

76. VAN HALL, Dr C.-J.-J., ancien Directeur de l'Institut Phytopathologique du Département de l'Agriculture, de l'Industrie et du Commerce des Indes Néerlandaises, Baarn.

#### West Indies.

- 77. BALLOU, Prof. H. A., Entomologist, Imperial College of Tropical Agriculture and Imperial Department of Agriculture for the West Indies, Trinidad, West Indies.
- 78. Briton-Jones, Dr. H. R., Mycologist, Imperial College of Tropical Agriculture and Imperial Department of Agriculture for the West Indies, Trinidad, West Indies.

#### Indochina.

79. CÉRIGHELLI, Ingénieur agronome, Docteur ès-sciences, Chef du Service de Protection des Plantes de l'Indochine, par l'intermédiaire de M. l'Inspecteur Général de l'Agriculture, de l'Elevage et des Forêts, Gouvernement Général de l'Indochine, H a n o i .

# Iraq.

 $\hbox{\tt \&o. Webster. J. F., B. A., Inspector-General of Agriculture, Baghdad, `Iraq.}$ 

#### Irish Free State.

81. MURPHY, Dr. Paul, A. R.Sc., Head of the Plant Diseases Division, Department of Lands and Agriculture, Government Buildings, D u b l i n, Irish Free State.

#### Italy.

- 82. Direzione Generale dell'Agricoltura, Ministero dell'Economia Nazionale, R o m a (Italia).
- 83. R. Stazione di Patologia vegetale, via S. Susanna, 13, R o m a (Italia).

#### Japan.

- 84. ISHIYAMA. Shin-ichi, Expert to the Imperial Agricultural Experiment Station, Nishigahara (Tökyô), Japan.
- 85. Ito. Seiva, Professor of Hokkaidô Imperial University, Sapporo (Hokka-idô). Japan.
- 86. Kinoshita, Shûta, Expert to the Imperial Agricultural Experiment Station, Nishigahara (Tôkyô), Japan.
- 87. KUWANA, Inokichi, Expert to the Department of Agriculture and Forestry, Tô-k vô, Japan.

88. Yano, Munemoto, Expert to the Imperial Forest Experiment Station, T  $\hat{o}$  k y  $\hat{o}$  , Japan.

#### Latvia.

- 89. EGLITS, Max, Chargé de cours à l'Université, Directeur de l'Institut pour la Protection des Plantes, Baznicas iela Nr. 4a, R i g a (Lettonie).
- 90. GAILIT, Laimon, Chargé de cours à l'Université, Entomologiste du Ministère de l'Agriculture, Département de la Sylviculture, Kalpaka, bulvari, Nr. 6, R i g a (Lettonie).

## Lithuania.

- 91. MASTAUSKAS, S., Professeur agrégé de l'Académie d'Agriculture, Dotnava (Lithuanie).
- 92. VILKAITIS, V., Professeur agrégé de l'Académie d'Agriculture, Dotnava (Lithuanie).

# Luxemburg.

- 93. FERRANT, Victor, préposé de la Station phytopathologique, L u x e m b o u r g (Grand-Duché de Luxembourg).
- 94. HEUERTS, Félix, Professeur, Luxembourg (Grand-Duché de Luxembourg).

#### Malta.

95. BORG, Prof. J., M.A., M.D., Superintendent, Agricultural Department, V a 11 e t t a. Malta.

#### Morocco (French).

Le Chef du Service de l'Agriculture, Direction Générale de l'Agriculture, du Commerce et de la Colonisation, R a b a t (Maroc).

#### Mauritius.

97. D'EMMEREZ DE CHARMOY, D., I. S. O., Assistant Director and Entomologist, De partment of Agriculture, R e d u i t, Mauritius.

#### Nigeria.

- 98. GOLDING, F. D., Senior Entomologist, Agricultural Department, I b a d a n, Nigeria.
- 99. LAYCOCK, T., A. R. C. S., D. I. C., Senior Mycologist, Agricultural Department, I b a d a n, Nigeria.

## Norway.

- 100. L'Entomologiste gouvernemental, Département Royal de l'Agriculture. O s 1 o (Norvège).
- 101. Le Mycologiste gouvernemental, Département Royal de l'Agriculture, O s l o (Norvège).

# Uganda.

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#### Palestine.

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- 104. SAWER, E. R., M. A., B. Sc., Director, Department of Agriculture and Forests, American Colony, Jerusalem, Palestine.

## Holland.

105. Le Service Phytopathologique de l'Etat, Wageningen (Pays-Bas).

#### Wales.

See England.

#### Persia.

- 106. ADLE, Ahmed Khan, Department of Agriculture, Teheran, Persia.
- 107. AFCHAR, Department of Agriculture, Teheran, Persia.

# Philippine Islands.

- 108. OTANES, Faustino O., Entomologist, Bureau of Agriculture, Department of Agriculture and Natural Resources, Manila, Philippine Islands.
- 109, TEODORO, Dr. Nicanor G., Phytopatologist, Bureau of Agriculture, Department of Agriculture and Natural Resources, Manila, Philippine Islands.

#### Poland.

- 110. GARBOWSKI, D' Louis, Chef de la Section des Maladies des Plantes de l'Institut Scientifique Agricole, B y d g o s z c z (Pologne).
- 111. MINKIEWICZ, D<sup>r</sup> Stanislas, Chef de la Section d'Entomologie de l'Institut Scientifique, Pulawy (Pologne).

# Porto Rico.

112. Соок, Dr. M. T., Chief Pathologist, Insular Experiment Station, Rio Piedras, Porto Rico.

# Dominican Republic.

- 113. CIFERRI, Dr. R., Fitopatólogo y Director de la Estación Nacional Agronómica y Colegio de Agricultura, Moca (República Dominicana).
- 114. RUSSO, Dr. G., Entomólogo de la Estación Nacional Agronómica y Colegio de Agricultura, M o c a (República Dominicana).

# Réunion (Island of).

115. Brun, Maurice, Service de l'Agriculture, Gouvernement de l'Ile de la Réunion. Saint-Denis.

#### Southern Rhodesia.

- II6. HOPKINS, J. C. F., B. Sc. (London), A. I. C. T. A. (Trinidad), Government Mycologist, Department of Agriculture, Salisbury, Southern Rhodesia, South Africa.
- 117. JACK, R. W., F. E. S., Chief Government Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia, South Africa.

#### Rumania.

- 118. ARION, Georges, Inspecteur entomologique au Ministère de l'Agriculture et des Domaines, B u c a r e s t (Roumanie).
- 119. KNECHTEL, Wilhelm, Inspecteur entomologique au Ministère de l'Agriculture et des Domaines, Bucarest (Roumanie).
- 120. SAVULESCU, D<sup>r</sup> Trajan, Professeur à l'Ecole Supérieure d'Agriculture, H e r a s t r a u B u c a r e s t (Roumanie).

#### Kingdom of the Serbs, Croats and Slovenes.

- 121. GRADOVEVITCH, Mihailo, Maître de Conférences de Pathologie végétale à l'Université, Belgrade (Royaume des Serbes, Croates et Slovènes).
- 122. NOVAK, P., Chef de la Station entomologique, S p l i t (Royaume des Serbes, Croates et Slovènes).
- 123. YOSIFOVITCH, D' Mladen, Maître de Conférences de Pathologie végétale à l'Université, Belgrade (Royaume des Serbes, Croates et Slovènes).

## Seychelles.

124. DUPONT, P. R., Director of Agriculture, Victoria, Mahé, Seychelles.

#### Siam.

125. Ministry of Lands and Agriculture, Bangkok, Siam.

# Sierra Leone

- 126. DEIGHTON, F. C., B. A., Mycologist, Lands and Forest Department, Freetown, Sierra Leone.
- 127. HARGREAVES, E., A. R. C. S., F. E. S., Entomologist, Lands and Forest Department, Experimental Farm, N j a l a, Via Mano, Sierra Leone.

# Syria (State of).

128. HALLAGE, Raphaël, Inspecteur des Epiphyties, Commission Consultative des Epiphyties, Haut Commissariat de la Répullique Française en Syrie et au Liban, D a m a s (Etat de Syrie).

## Sweden.

- 129. LINDFORS, Th., Chef du Service phytopathologique de l'Institut Central d'Expériences Agricoles, Experimentalfältet (Suède).
- 130. Nil.sson-Ehle, H.. Chef de l'Institut pour l'Amélioration des Semences, S v a l  $\ddot{\rm o}$  v (Suède).

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- 132. JEGEN, D<sup>r</sup>, Etablissement Fédéral d'Essais pour l'Arboriculture, la Viticulture et l'Horticulture, W a e d e n s w i l (Suisse).
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- 134. OSTERWALDER, Dr A., Etablissement Fédéral d'Essais pour l'Arboriculture, la Viticulture et l'Horticulture, W a e d e n s w i 1 (Suisse).

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- 136. REDJEB Bey, Professeur d'Entomologie, Chef du Laboratoire d'Entomologie de l'Ecole Supérieure d'Agriculture, Halkali, Constantinople (Turquie).

# Union of South Africa.

- 137. DODGE, Dr. E. M., Division of Botany, Horticulture and Entomology, Department of Agriculture, Union Buildings, Pretoria, Union of South Africa.
- 138. POLE EVANS, Dr. I. B., Chief of the Division of Botany, Horticulture and Entomology, Department of Agriculture, Union Buildings, Pretoria, Union of South Africa.
- 139. STOREY, Dr. H. H., Division of Botany, Horticulture and Entomology, Department of Agriculture, Union Buildings, Pretoria, Union of South Africa.

# Uruguay.

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- 141. TRUJILLO PELUFFO, Augustín, Ingeniero Agrónomo Regional, Sección Fomento y Defensa Agrícola de la Dirección de Agronomía, Calle Uruguay, 821, Monte video (Uruguay).

# Virgin Islands.

142. PERRY, W. M., Horticulturist, The Virgin Islands Agricultural Experiment Station, Saint Thomas, V. I.

143. THOMPSON, Dr. J. B., Director, The Virgin Islands Agricultural Experiment Station, Christiansted, Saint Croix, V. I.

# Zanzibar (Protectorate of).

144. NOWELL, W., D. I. C., F. L. S., Director, East African Agricultural Research Station, A m a n i , Tanganyika Territory, East Africa.

# DISCOVERIES AND CURRENT EVENTS

India: New Diseases reported during the Year 1928 (1).

MADRAS PRESIDENCY (Reported by the Government Mycologist):  $C \circ c \circ s$  n u c i f e r a, shoot rot. The organism primarily responsible for the disease is a species of Gloeosporium. Though by itself a weak parasite this fungus becomes active during the heavy monsoon, perhaps aided in its progress by other fungoid and bacterial organisms. Removal and destruction of the infected shoot, painting the cut ends with coal tar and cutting through the fibres to facilitate the emergence of the shoot have been found to control the disease satisfactorily.

Phaseolus Mungo var. radiatus, Arachis hypogaea, Hibiscus cannabinus, wilt. Rhizoctonia bataticola was observed to cause wilting of these three host plants. A pycnidial stage of this fungus (Macrophomina Phaseoli) was discovered on all these hosts and the interrelationship between the two forms established in cultures.

Eleusine coracana, mosaic disease. Mottling disease closely resembling mosaic was detected on this crop. It is however too early to say whether this is an infectious disease caused by a virus. Inoculation trials are in progress.

Musa sapientum, Fusarium wilt. A wilt of plantains resembling the Panama disease was detected in the Madura district. Cultural studies of the fungus showed it to approach Fusarium cubense. Some field experiments to control the fungus are in progress.

Cicer arietinum, wilt. A wilt was discovered in Coimbatore and Bellary districts. An unidentified species of Fusarium which has since been studied in culture was detected to be the cause of the disease.

Borassus flabelliformis, stem-bleeding disease. The palmyra palm was discovered to be another host to the fungus Thielaviopsis paradoxa which causes the stem-bleeding disease of coconut and arecanut palms. The symptoms of the disease on palmyra are essentially the same as those on coconut and areca palms.

Piper betel, wilt. Besides the Phytophthora which causes the wilt of betel vines, Sclerotium rolfsii was also found to cause the death of vines in Cingleput district. The fungus attacked the collar and the underground portion of the stem which it covered with the characteristic white fluffy growth.

Eleusine coracana, Sclerotium rolfsii. Specimens of diseased ragi from Vizagapatam district showed Sclerotium rolfsii. Cultivation of the fungus in cultures and inoculations on seedlings of Eleusine coracana have confirmed the suspicion that this cosmopolitan fungus was responsible for the death of the plants.

<sup>(</sup>i) Communication from the official correspondent to the Institute, Mr. W. McRae, D. Sc., M. A., F. L. S., Imperial Mycologist, Agricultural Research Institute, Pusa, Bihar, India.

United Provinces (Reported by the Plant Pathologist): Linseed. A species of *Alternaria* was found to cause much damage in the experimental plots at Cawnpore.

Sugar cane. A rugose type of mosaic was observed in some thick varieties of sugar cane. The symptoms are that the young unopened leaves become thickly corrugated or crinkled. The mature leaves show either waviness of the margin or puckering and unevenness of the surface of the leaf blade caused by irregular depressions and prominences, the depressions being occupied by chlorotic areas. In the older leaves the rugosity is completely masked by severe mottling.

BURMA (Reported by the Government Mycologist): Capsicum annuum, mosaic disease and Oidium erysiphoides. Phaseolus lunatus, Colletotrichum lindemuthianum. Coriandrum sativum, Erysiphe polygoni. Only the first is of any importance.

# LEGISLATIVE AND ADMINISTRATIVE MEASURES

Italy. — The Law of 3 January, 1929, No. 94, contains enactments dealing with the protection of cultivated plants and agricultural products against diseases and pests and with the services relating thereto.

Art. 1. — Cultivating owners and directors of nurseries, horticultural establishments and establishments for the preparation and selection of seeds, and all persons trading in plants, parts of plants or sowing seeds shall require a special permit for the exercise of their trade from the Prefect of the province who is authorised to grant it after consultation with the Director of the "Cattedra ambulante di Agricoltura".

Permits for nurseries for plants other than grape vines will be granted only after it has been ascertained that such nurseries contain no grape vines, that they are situated at least 20 metres from any grape vine stocks and that there have been deposited there no grape vine plants, grape vine props or vegetable fertilisers, mixtures, farmyard manure or soil coming from any place less than 100 metres from a vineyard. The authorisation shall be notified to the Ministry of National Economy, the Royal Phytopathological Observatory and to the Provincial Economic Council.

Art. 2. — The Ministry of National Economy will carry out through its representative officials or their staff or through the directors of the "Cattedre ambulanti di Agricoltura" periodical inspections of the nurseries, horticultural establishments, etc., authorised under article 1, and of preserved products wherever to be found, in order to ascertain that they are free from diseases or harmful or transmissible pests. Products considered infected may be sold only after the prescribed disinfection has been carried out in a thoroughly effective manner. In cases of serious infection the partial or total destruction of the infected material may even be ordered. The presence of disease or of harmful or transmissible pests may also necessitate the temporary suspension or withdrawal of a permit by the Prefect on the proposal of the Royal Phytopathological Observatory after verification of the results of the inspection. Appeals against suspension or withdrawal of permits may be made to the Minister of National Economy who will give his decision after consultation with the Plant Protection Committee. The Prefect's Decree for the suspension or withdrawal of a permit shall be notified to the Royal Phytopathological Observatory, the Ministry of National Economy, the Provincial Economic Council and to the Director of the "Cattedra ambulante di Agricoltura".

Art. 3. — The representative officials of the Ministry of National Economy have the right of entry into all land, whatever its present cultivation or future purpose, also

into all places for the storage, preparation and sale of plants, parts of plants and seeds, and into establishments for the selection and preparation of seeds, in order to determine the presence or absence of diseases or pests, and, if necessary, to proceed in accordance with the present Law and with the Regulations relating thereto to the disinfection, treatment or destruction of such plants, parts of plants, seeds or material as are infected or suspected of infection. The staff under the representative officials of the Ministry of National Economy in charge of the inspection, treatment, disinfection or destruction, has similar rights. Such representative officials and their staff have also free access into all railway and tramway stations and docks in the Kingdom, on board ships, into warehouses, rolling stock and into the holds of ships, by arrangement with and in the presence of the responsible staff.

Art. 4. — No compensation is payable for the destruction of plants, parts of plants, seeds or, in general, of material, carried out with the object of protecting cultivated plants and agricultural products against diseases and transmissible pests, or for any damage incurred in the course of the work of such destruction, treatment or disinfection. The Ministry of National Economy may, however, make special grants, according to the Regulations laid down for the application of this Law, in cases where the products destroyed were grown by small owners or tenant farmers cultivating the land themselves. The destruction of grape vines attacked by phylloxera may be ordered only by the Minister of National Economy on the advice of the Plant Protection Committee and no compensation is payable to the owner of the vines destroyed in the infected zone or in the protective zone, which shall not extend for a greater distance than 10 metres beyond the infected zone. Fifty per cent of the costs of destroying the grape vines attacked by phylloxera shall be payable by the Ministry of National Economy, which will advance the whole sum, forty per cent by the province and ten per cent by the Viticultural Association ("Consorzio per la Viticoltura").

Art. 5. — Only such plants, parts of plants and sowing seeds shall be circulated in the Kingdom as originate from nurseries, horticultural establishments, establishments for the selection and preparation of seeds, or firms trading in plants and seeds, having the special permit prescribed in article I above. The date and number of the permit together with the name of the Royal Prefecture by whom it was issued shall be indicated by the consignor on his own responsibility on the delivery notes, bills and invoices accompanying the goods. Packages containing plants, parts of plants or seeds shall be provided with strong card labels, shewing on one side the surname and Christian name and address of the consignor, as also the date and number of the permit together with the name of the Royal Prefecture by whom it was issued, and on the other the surname, Christian name and address of the consignee and the station to which the goods are to be sent. Any consignment of plants, parts of plants or seeds sent by private persons or establishments not included among those specified in article I must be accompanied by a special permit issued by the "Cattedra ambulante di Agricoltura" of the province. The above enactments do not apply to plants, parts of plants and seeds of any kind sent for examination to the Phytopathological Institutes, to the Royal Phytopathological Observatories, the "Cattedre ambulanti di Agricoltura" or to any other scientific institution. Plants, parts of plants and seeds, of which the importation from abroad after phytopathological inspection is authorised, shall be accompanied during their circulation within the Kingdom by the importation permit issued by the representative official of the Ministry of National Economy who inspected the goods at the frontier and by special certificates on coloured labels attached by the representative official to each package. The bawking of seeds, plants or parts of plants for purposes of cultivation is prohibited.

Art. 6. — Grape vines or their parts with roots, even when dead, may not for any reason whatever be exported from districts declared infected or suspected of infection

with the grape phylloxera, and in consequence cannot circulate outside such districts except after disinfection by the methods specified by the Royal Phytopathological Observatory and in accordance with the precautions prescribed by the Observatory for preventing the diffusion of grape phylloxera.

By Decree of the Minister of National Economy the details and limits of applicability of the prohibitory enactments referred to in the preceding paragraph and in paragraph 2 of article 1 may be modified, and rules may be established for the circulation of plants, parts of plants or seeds coming from districts which are infected or suspected of infection with grape phylloxera.

Art. 7. — Cultivating owners and directors of nurseries, horticultural and other authorised establishments shall notify to the "Cattedra ambulante di Agricoltura" of the province, which shall immediately inform the Royal Prefecture and the Royal Phytopathological Observatory, any outbreak of diseases or pests prejudicial to the healthy condition of crop plants, as also any indication of the presence of diseases or pests and any changes in situation or extent of premises or land, in order to facilitate the application of this Law. Failure to comply with this rule is punishable by a fine not exceeding a thousand liras and may entail the suspension or withdrawal of the permit.

Art. 8. - The Minister of National Economy may, by Decree :-

(a) suspend the importation into the Kingdom of plants, parts of plants and seeds considered infected; (b) fix the frontier stations and ports by which plants, parts of plants and plant products may be imported from abroad; (c) prohibit the exportation of plants, parts of plants and seeds from such communes as are known to be infected with diseases or transmissible pests other than grape phylloxera; (d) regulate and, if necessary, suspend the foreign exportation of plants, parts of plants, seeds and plant products.

Art. 9. — The representative officials of the Ministry of National Economy belonging to the frontier and coast guards are authorised:— (a) to order the disinfection or destruction of plants, parts of plants and seeds regarded as infected, also of any materials, packings, receptacles, etc., capable of carrying infection; (b) to prohibit the introduction into and transport in the Kingdom of plants, parts of plants and seeds which they consider to be infected or carriers of germs of diseases or pests, according to the rules prescribed by the Ministry of National Economy; (c) to prohibit the foreign exportation of plants, parts of plants, seeds and plant products which they consider to be infected or carriers of germs of infection, according to the rules prescribed by the same Ministry. No compensation is payable to the persons concerned for the destructions, disinfections and prohibitions referred to in this article.

Art. 10. — The Minister of National Economy may, by Decree, after consultation with the Plant Protection Committee:—

(1) make it compulsory to apply remedies against crops diseases and to use control methods against insects and other plant pests in such cases as depend for an effective control upon the common and simultaneous action of all concerned, the control measures being carried out at the expense of recalcitrants and defaulters;

(2) order the formation of obligatory Associations ("Consorzî") among owners or cultivating owners for carrying out protective measures against certain diseases and insect or other pests of cultivated plants.

Art. 11. — Owners and cultivating owners of holdings where plants are attacked by diseases or transmissible pests may combine to form optional communal or intercommunal "Consorzî", for protective work either of a temporary or permanent character. These "Consorzî" may be recognised for the purposes of this Law by Decree of the Prefect after consultation with the Director of the "Cattedra ambulante di Agricoltura"

and with the Agricultural and Forestry Section of the Provincial Economic Council. The recognition of the "Consorzio" shall be notified to the Ministry of National Economy.

Art. 12. — The formation of "Consorzî" may be made compulsory by Decree of the Prefect on the proposal of the Director of the "Cattedra ambulante di Agricoltura" and on the advice of the Agricultural and Forestry Section of the Provincial Economy Council in cases where the necessity for control of diseases, insects or other pests of cultivated plants is clearly in the public interest on account of the serious risk of the spread of the disease or multiplication of the insect or other pest found to be present. A compulsory "Consorzio" may be communal, intercommunal or provincial, have a duration limited to a period of years (temporary "Consorzî") or unlimited (permanent "Consorzî").

Art. 14. — "Consorzî" against grape phylloxera formed in conformity with the single amalgamated text of the Laws regarding grape phylloxera and the Anti-phylloxera "Consorzî", dated 23 August, 1917, No. 1474, are called "Consorzî per la Viticoltura", are compulsory, permanent, provincial Associations and come under the terms of the present Law, as also any future Associations established for similar purposes. In provinces where several Anti-phylloxera "Consorzî" are in existence these will be combined into a single provincial "Consorzio per la Viticoltura" which will receive the property of the former separate "Consorzî". The obligatory "Consorzî per l'Olivicoltura", however formed, which conform to the Law of 26 June, 1913, No. 888, and to the Royal Decree-Law of 12 August, 1927, No. 1754, and any which shall be formed in conformity with this Decree and the present Law, may be communal, intercommunal or provincial and may be temporary or permanent.

Art. 14. — The "Consorzî" for the protection of crops against diseases and pests formed by this Law are for the purpose of :— (1) the organisation and control of protective operations undertaken by the members of a "Consorzio" against diseases and pests of cultivated plants; (2) the direct execution of such operations on behalf of the all members of a "Consorzio" or of recalcitrants and defaulters at their expense; (3) the direct execution of defence operations ordered by the Ministry of National Economy. In addition the "Consorzî per la Viticoltura" are required to provide for the establishment and management of nurseries for grape vines resistant to phylloxera in order to facilitate the re-stocking of affected vineyards, and also to encourage in every way possible the progressive technical development of viticulture and its economic prosperity. The Ministry of National Economy will be able to provide without charge cuttings for the plantation of vineyards of American resistant varieties.

Art. 15. — The recognised communal and intercommunal "Consorzî", obligatory and option I are administered by a Commission appointed by the Prefect and consisting of five members: a President, two members chosen from among the persons concerned by the Agricultural and Forestry Section of the Provincial Economic Council, one member by the "Federazione Provinciale dei Sindacati Fascisti degli Agricoltori" and one member recommended by the "Confederazione Nazionale dei Sindacati Fascisti". The provincial obligatory "Consorzî" are administered by a Commission also consisting of five members: a President appointed by the Minister of National Economy and four members appointed by the Minister recommended as above. The members of the Commission are elected for three years but may be retained in office. The "Consorzî" are subject to the authority of the Minister of National Economy who may at any time dissolve the Commission and appoint a Commissioner to take charge exceptionally of their administration, for not longer than a year.

Art. 16. — The "Consorzî" established in conformity with this Law have the right to levy, in such manner as shall be laid down in the Regulations for application of this Law, an annual contribution of from 25 to 50 centimes per hectare on the owners concerned

within their jurisdiction, for general expenses of administration. The "Consorzio" has the right to make use of the procedure and privileges of the Law for the direct collection of dues by means of contribution lists which shall be made authoritative by the Prefect of the province and to collect in forms prescribed by the Law, in addition to the charges referred to above, the repayment of expenses entailed in the carrying out of protective operations. The annual contribution to the provincial "Consorzi per la Viticoltura" will be divided among all the owners of land other than forest or pasture in proportion to the total area of vineyards and grape vine cultivation in the province; this payment shall not exceed 2 liras per hectare and the total sum shall be divided among all the landowners as mentioned above in proportion to the number of hectares owned by each, counting fractions over a half-hectare as a hectare and disregarding smaller fractions. With regard to the "Consorzi per l'Olivicoltura", the contribution for the general administrative expenses is as provided for in article 5 of Royal Decree-Law No. 1754 of 12 August, 1927, whereas the expenses of the various control operations shall be allotted and charged according to the provisions of this Law.

Art. 17. — In case of the dissolution of a "Consorzio" the balance of any credits resulting from the budget and the activities of the "Consorzio", if optional, shall be refunded to the members in proportion to their contributions and, if obligatory, to the Provincial Economic Council which shall employ it for work connected with the progressive development of agriculture.

Art. 18. — The Institutes of Agricultural Credit established by Royal Decree-Law of 29 July, 1927, No. 1509, are authorised to grant to the obligatory "Consorzî" referred to in the previous articles loans for the direct control of crop pests and parasites, and for the purchase of the necessary appliances and material; these loans to be repaid at latest within two years and guaranteed by means of promissory notes held by the persons responsible for receiving the various sums specified on the personal contribution lists, according to the rules of article 16.

Art. 19. — The enactments already in force for Anti-phylloxera "Consorzî" are applicable to the "Consorzî per la Viticoltura" in all matters relating to the necessary provisions for the plantation of vineyards for the production of resistant varieties, for the replanting of vineyards destroyed or attacked by grape phylloxera and for the planting of new vineyards.

Art. 20. — The Ministry of National Economy may itself undertake locust control when necessary after consultation with the Plant Protection Committee without giving notice or official order to the owners or farmers of the land, to whom no compensation of any kind is payable. One half the cost of these control measures is payable by the State, which may advance the whole sum, and one quarter by the province and one quarter by the commune or communes concerned. The province and communes undertake to refund to the State the sums advanced. The communes may contribute labour in part payment, exacting the required labour from their peasants, payments being made only in necessitous cases. Where communes do not supply this labour when it is essential, the Prefect shall make the necessary provision by a special Decree on the proposal of the representative officer of the Ministry of National Economy.

Art. 21. — In exceptional cases, when it is essential by reason of the nature and importance of the work to be carried out or of the risk involved, the State may provide for the costs of directing the protective operations against crop diseases and pests and also contribute half the total costs of these operations. The other half is payable by the persons concerned and may be advanced by the State on the understanding that it is repaid during two financial years or some longer period and guaranteed by promissory notes held by the persons responsible for receiving the contributions of the "Con-

sorzi ' and by any other guarantees established by the Regulations for the application of this Law.

Art. 22. - The Consultative Committee for Plant Protection formed by Royal Decree of 30 December, 1923 will be entitled the Plant Protection Committee and will consist of the following members :-- the Minister of National Economy who will act as President, or in his place the Under-Secretary of State for Agriculture - the Director General of Agriculture, who will act as Vice-President; the Director General of Commerce; the chief of the Department to which the Phytopathological Service is attached: the General Commandant of the "Milizia Nazionale Forestale"; a retresentative of the Colonial Ministry; five memb rs appointed by the Minister of National Fronomy of whom four will be elected from among the Directors of the Royal Institutes of Plant Pathology and Agricultural Entomology and a Director of the Cattedra ambulante di Agricoltura". The members appointed by the Minister hold office for three years and may be re-appointed. In addition to the advisory functions specified by this Law the Committee will investigate problems relating to the control of diseases and parasites and in general of all possible sources of damage to crops and agricultural ; roducts and also will consider questions presented by the Minister of National Economy. The actions of the Committee will be governed by the Regulations for the application of this Law.

Art. 23.—In addition to the Central Service at the Ministry of National Economy the work of plant protection is undertaken by:— '1 the Institutions for Scientific Research and Experiment in Phytopathology; 2, the Royal Phytopathological Observatories; '(3) the Provincial Commissions on Plant Diseases and 4, the Identification Laboratories.

The Institutions for Scientific Research and Experiment in Phytopathology are:—
(a) the Royal Station of Plant Pathology at Rome and the Royal Station of Agricultural Entomology at Florence; (b) the Plant Pathological Laboratories attached to the Higher Institutes of Agriculture at Bologna and Milan, the Royal Cryptogamic Laboratory at Pavia and the Laboratory of Agricultural Entomology at the Higher Agricultural Institute at Portici.

The internal control of plant importation and exportation, of nurseries and of the organisation of protective operations are entrusted to the Royal Phytopathological Observatories, together with any work for which the Ministry of National Economy may make them responsible. The number and situation of the Observatories to be established will be decided by the Ministry of National Economy according to the requirements of the services, the means and the staff available. The Provincial Commissions are under the charge of the provincial "Cattedre ambulanti di Agricoltura" and the direction of the Directors of the "Cattedre". In addition to the control specified in the present Law the Commissions are responsible for organising and giving technical assistance to the "Consorzi" and for the local direction of compulsory protective operations. The Identification Laboratories may be established in connection with Institutes and Bureaux dependent on the Ministry of National Economy and also in connection with Institutes for Agricultural Education and their main purpose shall be the identification of plant diseases and pests at the request of the establishments or individual farmers. The plant pathological inspectors and representative officials in charge of grape phylloxera control are at the disposal of the Ministry of National Economy for the inspection and control entailed in the application of this Law and for the organisation of protective operations and of any other work for which the Ministry may make them responsible.

Art. 24. The Provincial Economic Councils shall within one year of the entry into force of this Law provide for the preparation, and submission for the approval of the Ministry of National Economy, of the special Regulations of a general order governing

the control of the diseases and pests of crops and agricultural products. These Regulations shall so far as possible serve as a standard for the preparation of the communal Regulations. The officials of the "Milizia Nazionale Forestale", the rural police, the communal forest police and private authorized watchmen shall report cases of plant diseases and pests which come under their notice to the provincial "Cattedra ambulante di Agricoltura".

- Art. 25. In each province the technical direction of the "Consorzio per la Viticoltura" will be undertaken by the Director of the "Cattedra Ambulante di Agricoltura" in his capacity as Provincial Commissioner for Plant Diseases. In provinces where the extension of nurseries undertaken by the "Consorzî" for the production of grape vines requires special assistance, the Ministry of National Economy may transfer to the provincial "Consorzio" one or more anti-phylloxera representative officials for the management of certain nurseries or groups of nurseries.
- Art. 26. Infractions of the enactments governing the importation and circulation of plants, parts of plants and seeds are punishable by a fine of from one hundred to two thousand liras, without prejudice to the higher penalties incurred under the Customs laws on contraband or under the penal code for offences with which it is concerned. In cases of the hawking of cuttings and layers of American grape vines the stock in trade will also be confiscated and immediately destroyed. The Royal Government has authority to prescribe, in the Regulations for the application of this Law, penalties up to a fine of one thousand liras.
- Art. 27. Laws No. 2517 (Series II) of 30 May, 1875 on Doryphora [Leptino-tarsa] decemlineata; No. 130 of 24 March, 1904 on Diaspis pentagona; No. 888 of 26 June 1913 on measures for the prevention and control of plant diseases; the amalgamated single text of Laws on grape phylloxera and Anti-phylloxera "Consorzi" No. 1474 of 23 August, 1927, and other measures on this subject contained in Lieutenancy Decrees, No. 738 of 12 May, 1918, No. 466 of 10 March, 1919 and No. 819 of 15 May, 1919, also Lieutenancy Decree, No. 1214 of 14 July, 1018, concerning locust control, and any other rules contrary to those contained in this Law, which will come into force as from the 1st of July, 1929, are hereby abrogated. (Gazze ta ufficiale del Regno d'1 alia, Roma, 8 febbraio 1929, anno 70°, n. 33, pp. 624-628).

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